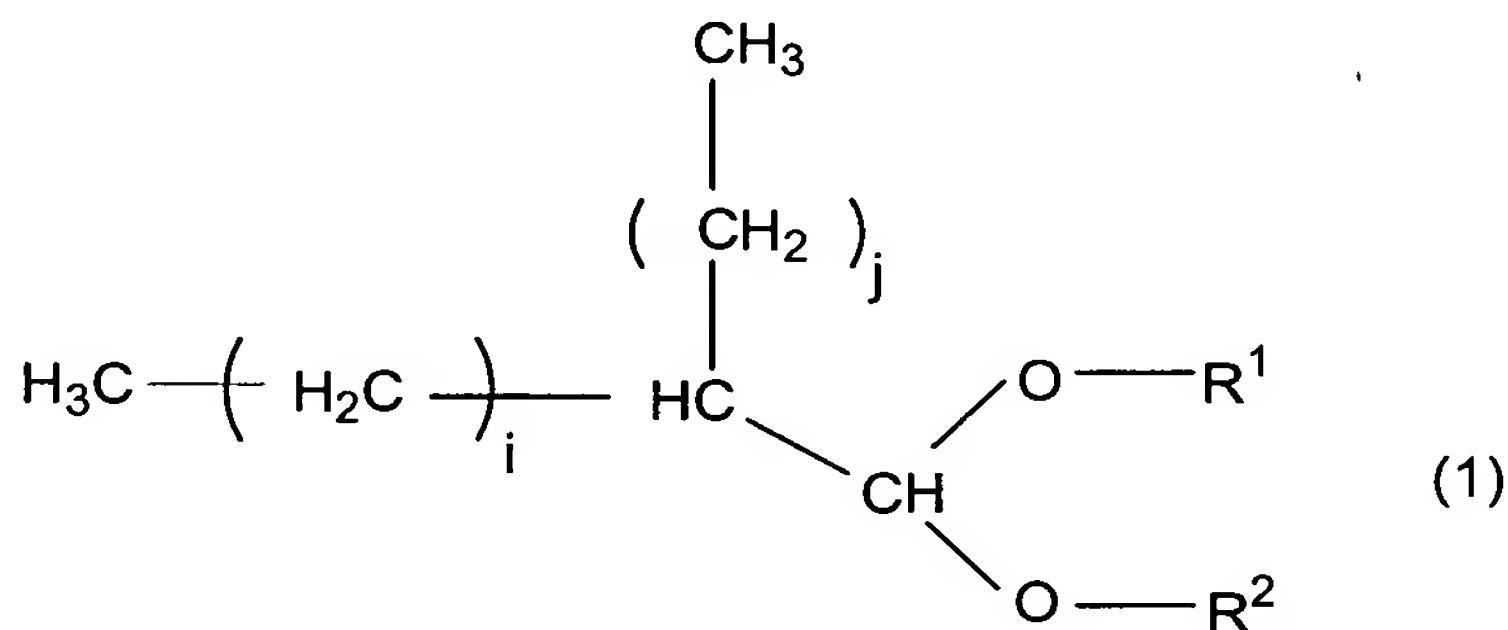


IN THE CLAIMS

Please amend the claims as follows:

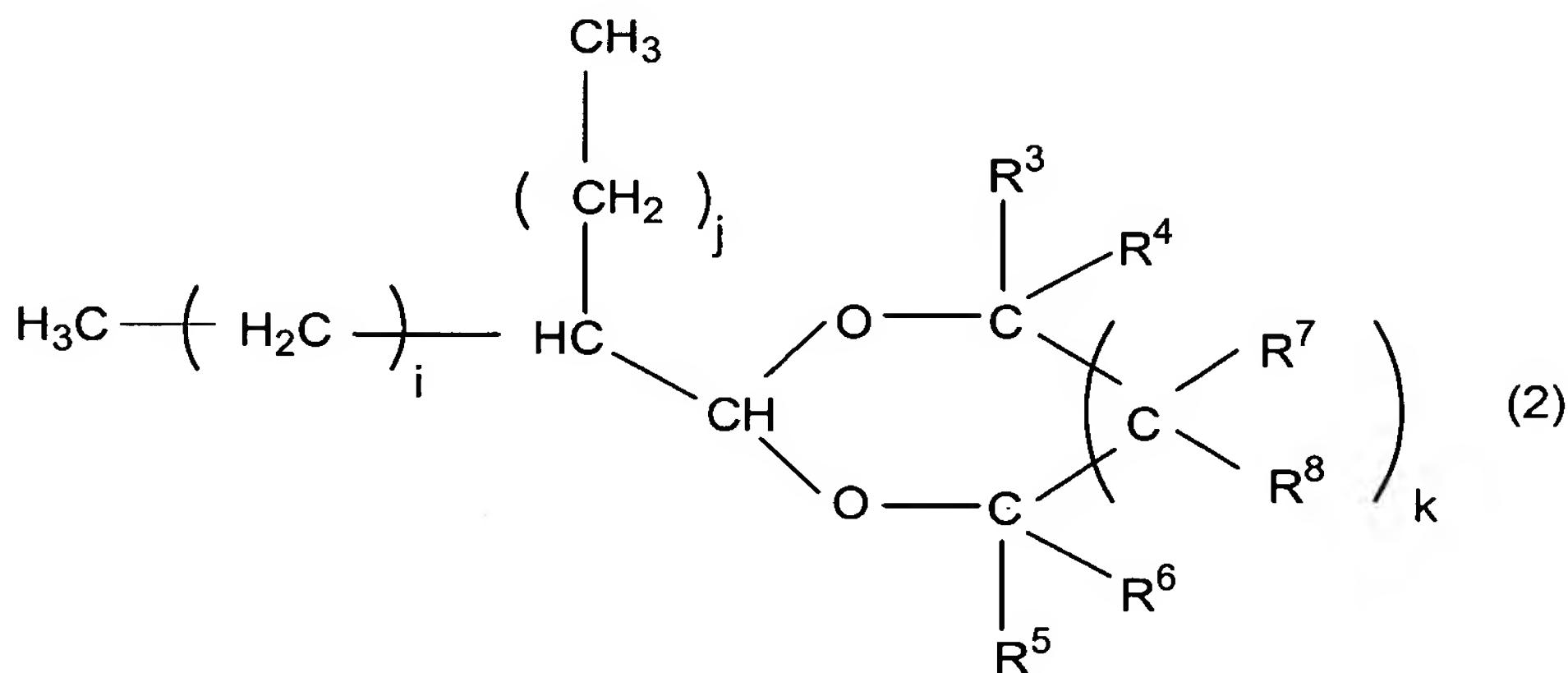
Claim 1 (Original): An alkylacetal compound having a structure represented by following general formula (1):



wherein R¹ and R² each independently represent a hydrocarbon group, and i and j each represent an integer satisfying a relation that a sum of the integers is in a range of 8 to 98.

Claim 2 (Original): An alkylacetal compound according to Claim 1, wherein i represents n, and j represents n+2, n representing an integer in a range of 3 to 48.

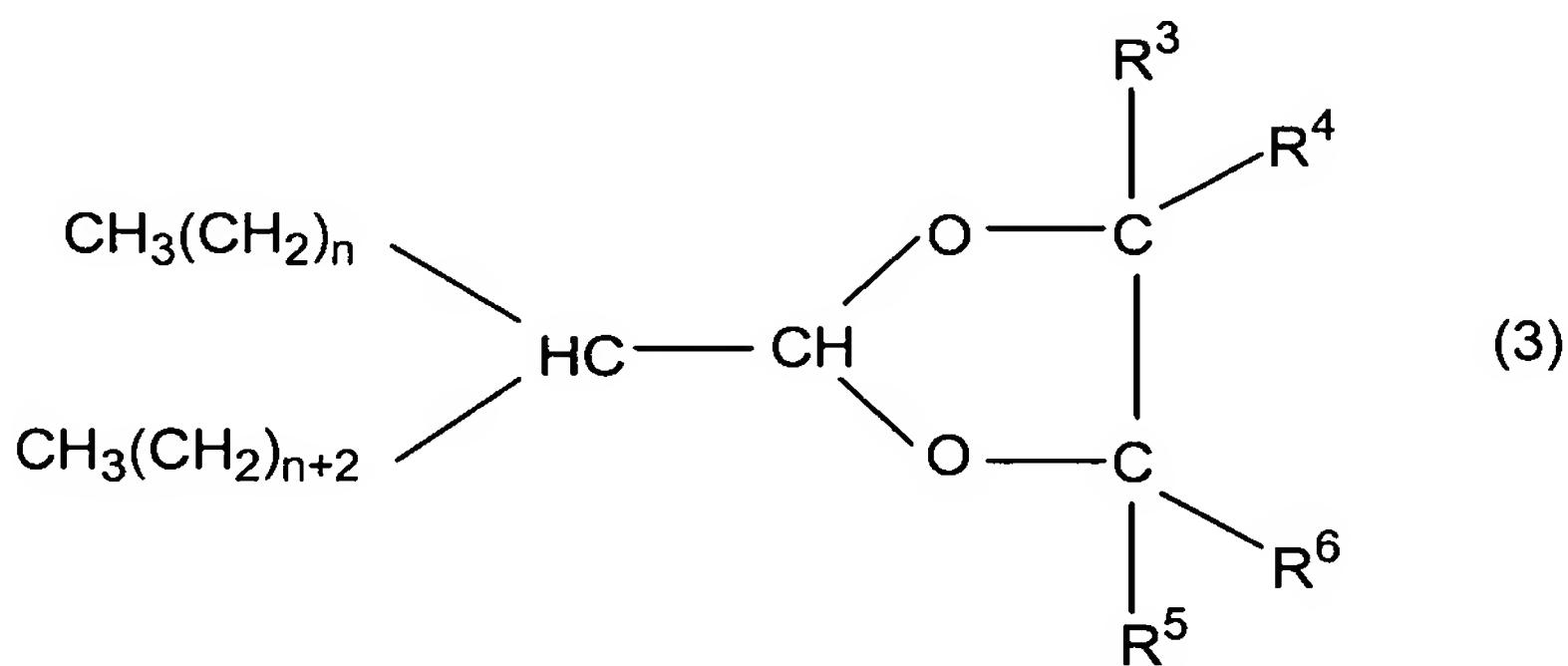
Claim 3 (Original): An alkylacetal compound having a structure represented by following general formula (2):



wherein R³ to R⁸ each independently represent hydrogen atom or a hydrocarbon group, k represents 0 or 1, and i and j each represent an integer satisfying a relation that a sum of the integers is in a range of 8 to 98.

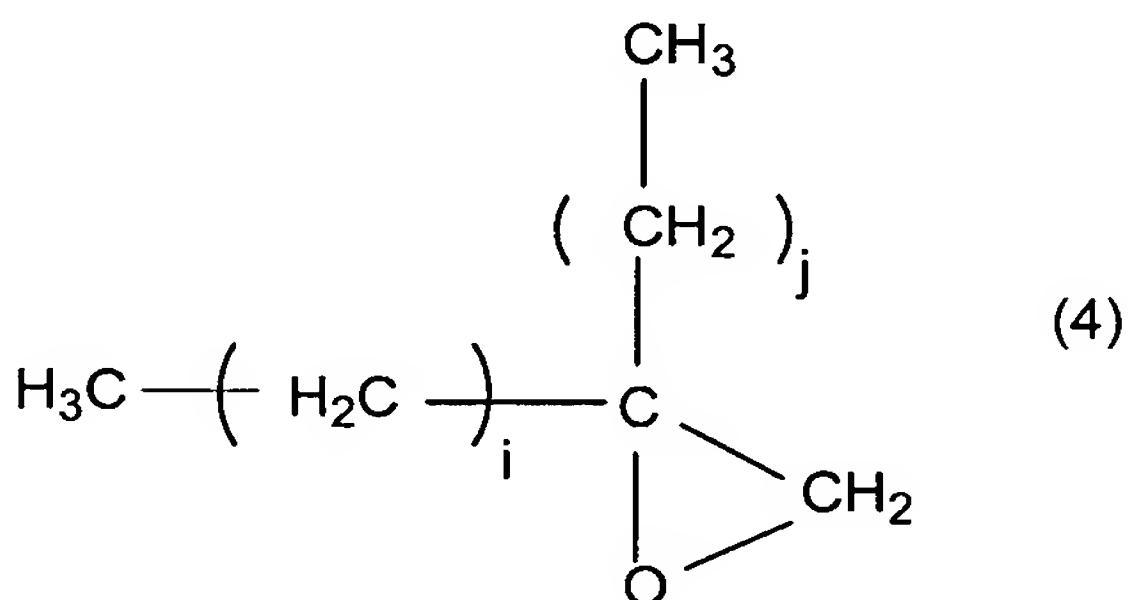
Claim 4 (Original): An alkylacetal compound according to Claim 3, wherein i represents n, and j represents n+2, n representing an integer in a range of 3 to 48.

Claim 5 (Original): An alkylacetal compound according to Claim 4, which is represented by following general formula (3):



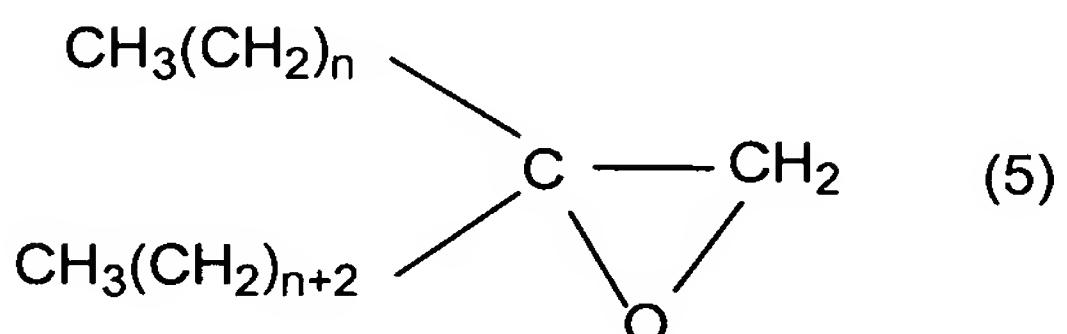
wherein R³ to R⁶ are as defined in general formula (2), and n represents an integer in a range of 3 to 48.

Claim 6 (Currently Amended): A process for producing an alkylacetal compound described in ~~any one of Claims 1 and 5~~ Claim 1 which comprises reacting an alcohol with an epoxide represented by following general formula (4):



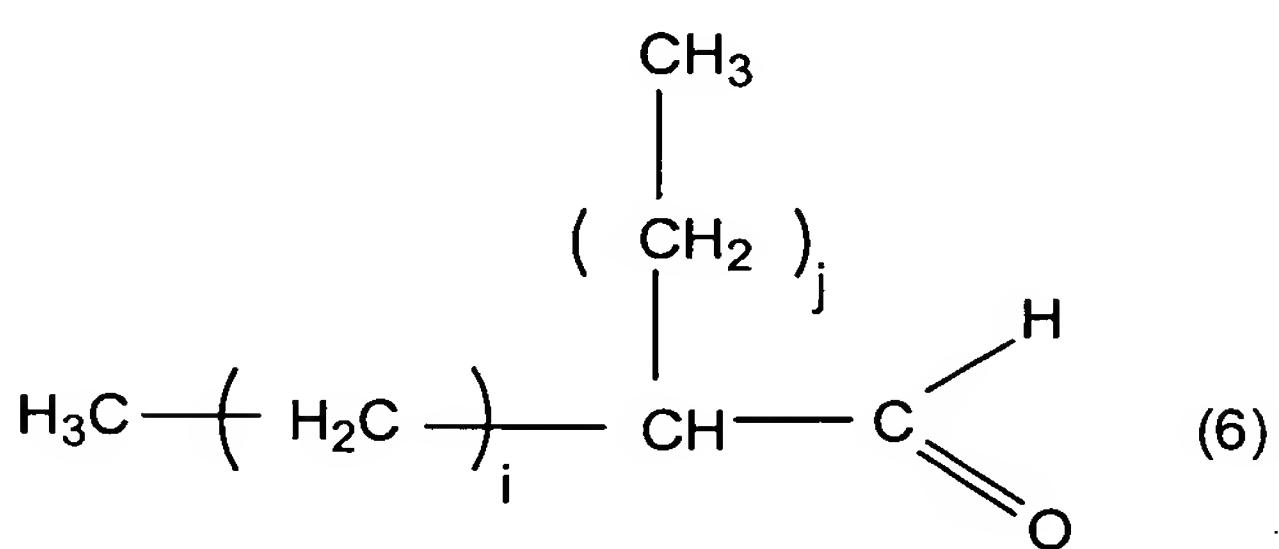
wherein i and j each represent an integer satisfying a relation that a sum of the integers is in a range of 8 to 98.

Claim 7 (Original): A process for producing an alkylacetal compound according to Claim 6, wherein the epoxide is a compound represented by following general formula (5):



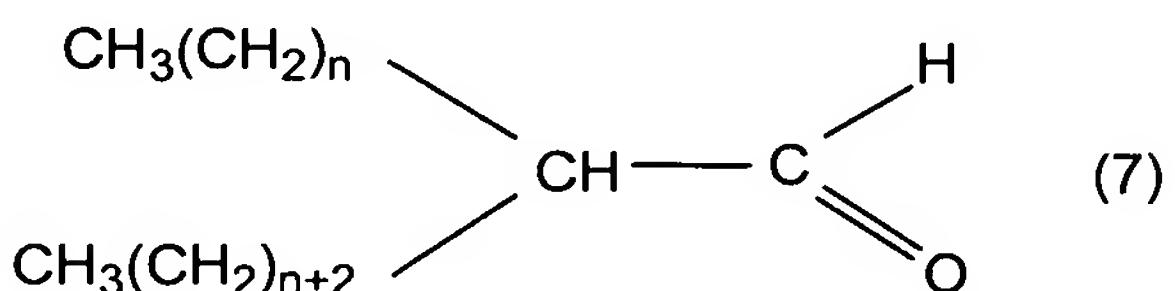
wherein n represents an integer in a range of 3 to 48.

Claim 8 (Currently Amended): A process for producing an alkylacetal compound described in ~~any one of Claims 1 and 5~~ Claim 1 which comprises reacting an alcohol with an aldehyde represented by following general formula (6):



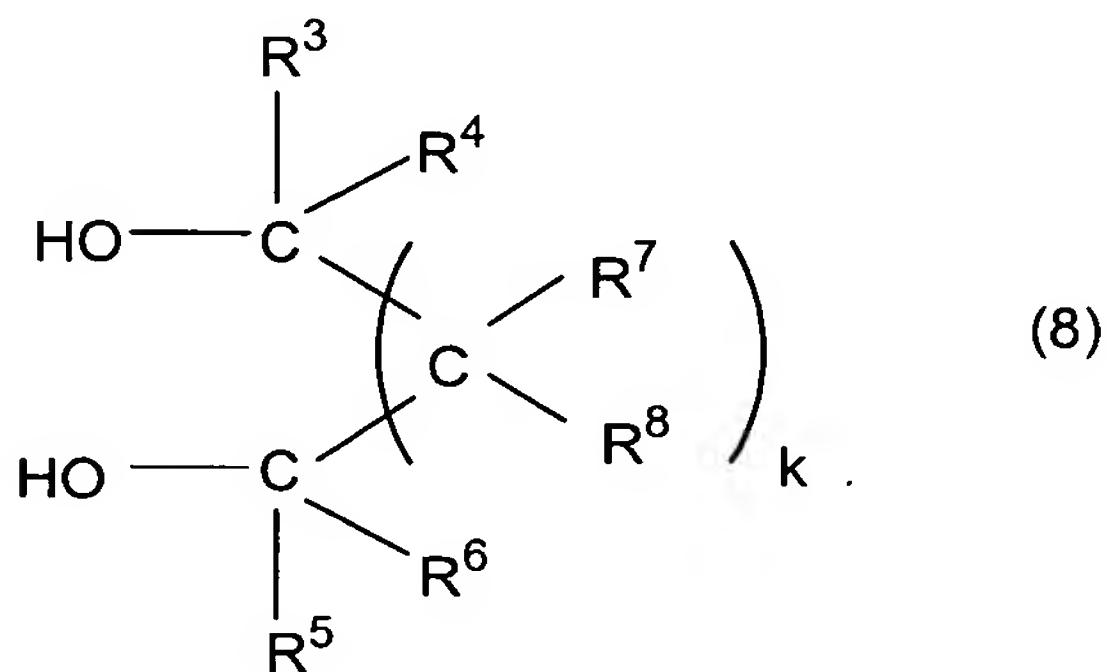
wherein i and j each represent an integer satisfying a relation that a sum of the integers is in a range of 8 to 98.

Claim 9 (Original): A process for producing an alkylacetal compound according to Claim 8, wherein the aldehyde is a compound represented by following general formula (7):



wherein n represents an integer in a range of 3 to 48.

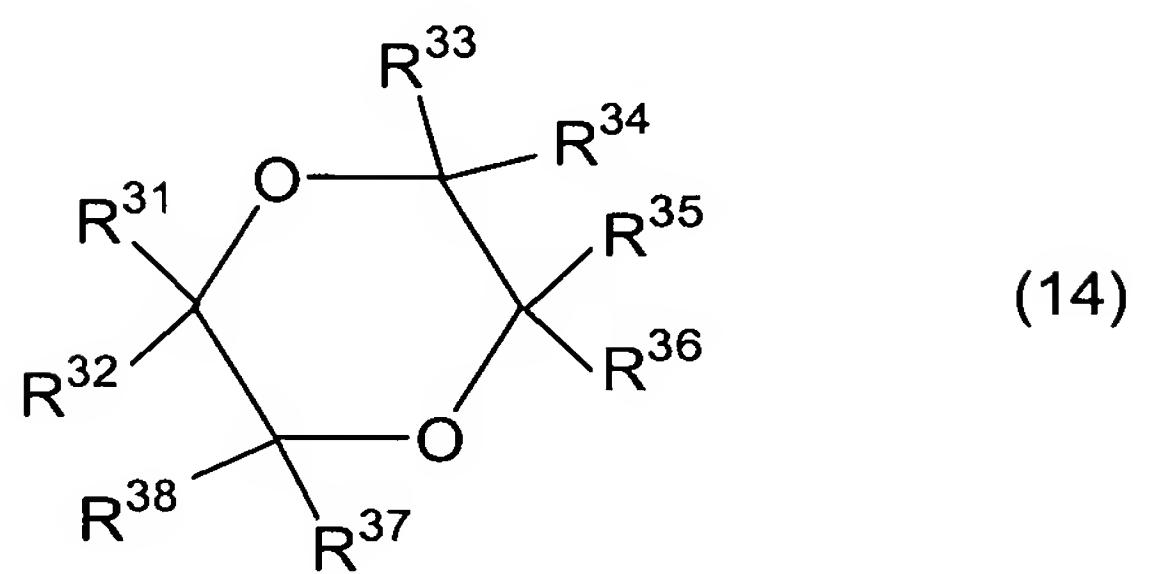
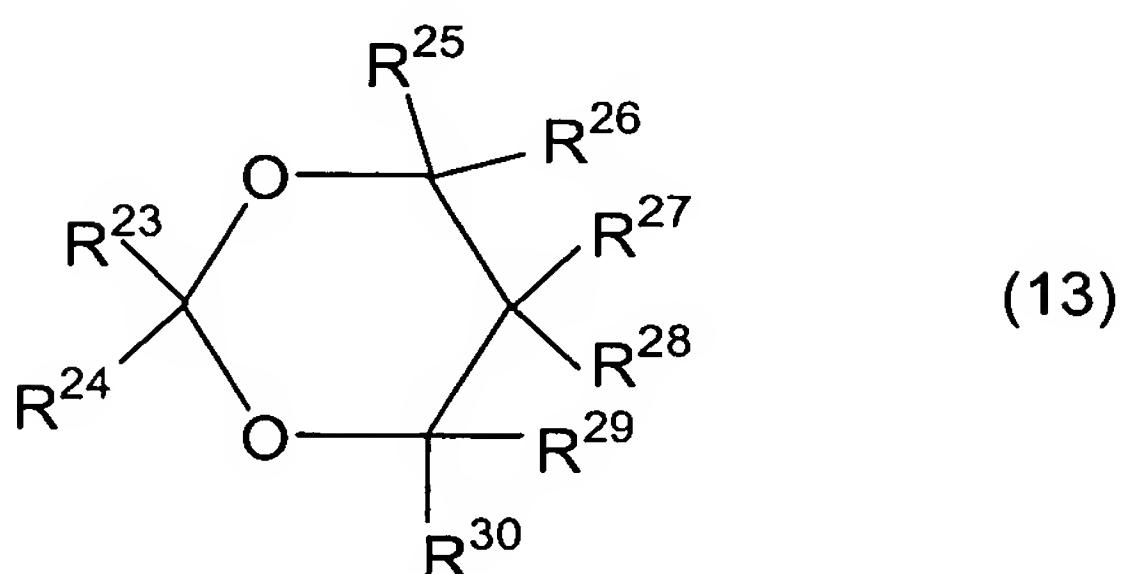
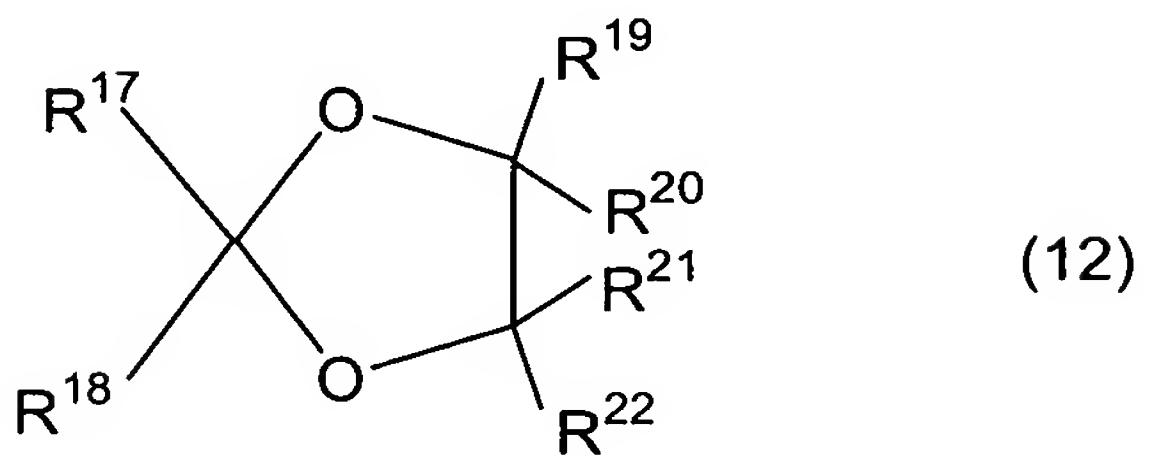
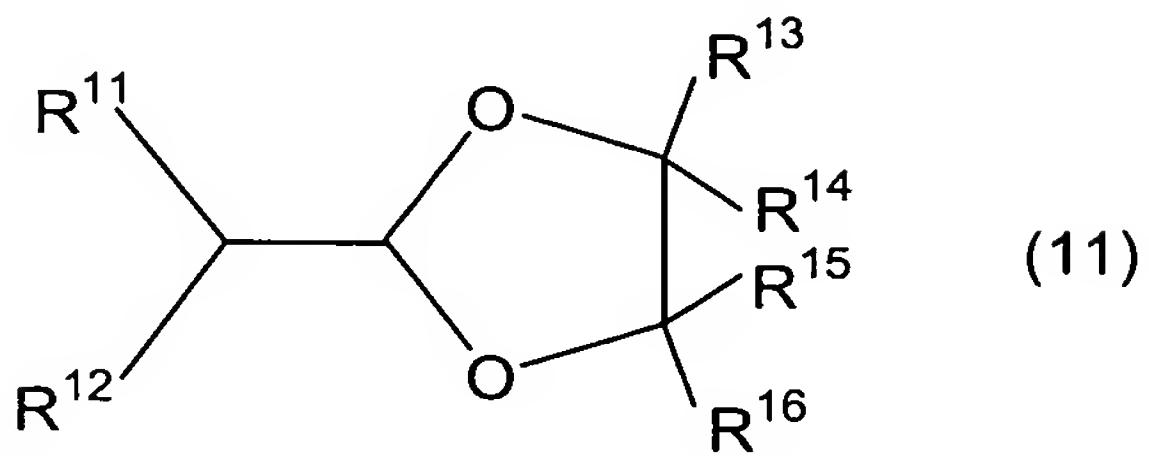
Claim 10 (Currently Amended): A process for producing an alkylacetal compound according to ~~any one of Claims 6 to 9~~ Claim 3, wherein the alkylacetal compound represented by general formula (2) is produced using as the alcohol a glycol represented by following general formula (8):



wherein R³ to R⁸ reach independently represent hydrogen atom or a hydrocarbon group, and k represents 0 or 1.

Claim 11 (Original): A process according to Claim 10, wherein the glycol is a compound selected from ethylene glycol, propylene glycol, 1,3-trimethylene glycol, derivatives of 1,3-trimethylene glycol and 1,2-butanediol.

Claim 12 (Original): A lubricating oil composition for metalworking which comprises a base oil and at least 1% by mass based on a mass of the composition of at least one compound selected from dioxolane compounds represented by following general formula (11), dioxolane compounds represented by following general formula (12), dioxane compounds represented by following general formula (13) and dioxane compounds represented by following general formula (14):

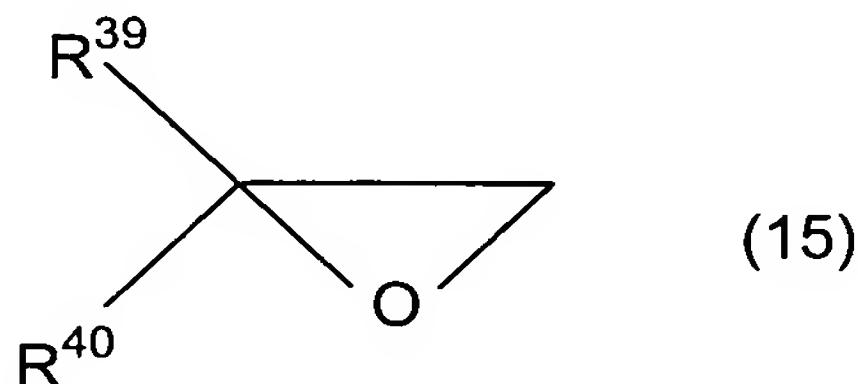


wherein R¹¹ to R³⁸ each independently represent hydrogen atom or a group selected from saturated hydrocarbon groups having 1 to 30 carbon atoms, unsaturated hydrocarbon groups having 1 to 30 carbon atoms and hydrocarbon groups having 1 to 30 carbon atoms and having ether bond, ester bond or hydroxyl group.

Claim 13 (Original): A lubricating oil composition for metalworking according to Claim 12, wherein at least one of R¹¹ to R³⁸ in general formulae (11) to (14) represents a hydrocarbon group having a hydrocarbon chain having nitrogen atom.

Claim 14 (Currently Amended): A lubricating oil composition for metalworking according to ~~any one of Claims 12 and 13~~ Claim 13, wherein the base oil is at least one compound selected from polybutene, polyisobutylene and polyalkylene glycols insoluble in water and has a kinematic viscosity in a range of 5 to 3,000 mm²/s at 40°C, and a content of the base oil is 95% by mass or smaller based on a mass of the composition.

Claim 15 (Currently Amended): A lubricating oil composition for metalworking according to ~~any one of Claims 12 to 14~~ Claim 14, which comprises at least 0.01% by mass based on a mass of the composition of at least one 2,2-dialkylepoxyde compound represented by following general formula (15):



wherein R³⁹ and R⁴⁰ each independently represent a group selected from saturated hydrocarbon groups having 1 to 30 carbon atoms, unsaturated hydrocarbon groups having 1 to 30 carbon atoms and hydrocarbon groups having 1 to 30 carbon atoms and having ether bond, ester bond or hydroxyl group.

Claim 16 (Currently Amended): A lubricating oil composition for metalworking according to ~~any one of Claims 12 to 15~~ Claim 12, which comprises 0.01 to 10% by mass based on a mass of the composition of at least one of benzotriazole and derivatives thereof.

Claim 17 (Currently Amended): A lubricating oil composition for metalworking according to ~~any one of Claims 12 to 16~~ Claim 12, which is used for copper or a metal containing copper.

Claim 18 (New): A process for producing an alkylacetal according to Claim 3 formula (2) by reacting an alcohol with an epoxide of formula (4) as set forth in Claim 6.

Claim 19 (New): A process for producing an alkylacetal compound described in Claim 3 formula (2) by reacting an alcohol with an aldehyde of formula 6 as set forth in Claim 8.